

practically the whole increased incidence in the "oxygen" group was due to cases of atelectasis.

The hypothesis put forward by Dr. Philip Ayre in the concluding paragraph of his letter (*Journal*, December 17, 1938, p. 1279) would therefore seem, so far as this investigation went, to be abundantly justified.—I am, etc.,

Burnley, Jan. 17.

A. DUFF, M.D., F.R.C.S.Ed.

Ulcerative Colitis

SIR,—Personal experience of ulcerative colitis tends to confirm Sir Arthur Hurst's contention (*Journal*, January 14, p. 85) that the aetiology of this condition is of a two-fold nature—some form of infection acting on a "predisposed bowel." The primary infection may cause only slight and temporary symptoms, and these may be overlooked and forgotten when the first real flare-up of ulcerative colitis occurs some time later. As regards treatment, the first essential is to avoid anything that is at all likely to irritate the bowel and aggravate the condition, particularly in the acute form. The acutely inflamed bowel requires as much rest as possible. All forms of local treatment, such as bowel wash-outs, should be taboo. Substances to give bulk to the stools usually only cause further irritation. If severe haemorrhage is a marked feature opium should be more freely given. Apart from rest in bed and a suitable and adequate diet (Bergen's diet is an excellent example), the sheet-anchor of treatment, especially in the acute pyrexial stage, should be blood transfusion. This should be repeated until a normal haemoglobin level is obtained. Iron, which is usually recommended, even in comparatively small doses, may aggravate many cases of colitis. Blood transfusion, moreover, seems to have a beneficial influence on the course of the disease far beyond that due to the general improvement in the blood. This is most striking when the transfusion is followed by a reaction and a high temperature, and is probably a non-specific protein effect. In fact, many simple uncomplicated conditions with temporary acute pyrexia may result in improvement in the colitis. I have seen such improvement follow a simple influenza, and it raises the question whether there is a field for the treatment of the chronic condition by artificial pyrexia.—I am, etc.,

Leeds, Jan. 16.

M. GORDON.

Bilateral Rupture of Quadriceps Tendon

SIR,—In the *Journal* of December 31, 1938 (p. 1369), Mr. K. L. James quoted a case of bilateral rupture of the quadriceps tendon. As this accident is apparently so rare it may be of interest to record a further case.

On September 13, 1935, a man aged 59 was admitted to the Connaught Hospital suffering from this painful condition. He was operated upon the same evening, both legs being treated simultaneously, Mr. R. Vaughan Hudson doing one while I did the other. Both knee-joints contained blood and both tears involved the vasti muscles. There was no necessity to drill either patella as there was sufficient muscle still attached to each bone to allow a satisfactory suture. Silk was the material used. The wounds healed by first intention, and apart from a marked pyrexia for the first three days the patient made an uneventful recovery. Massage was begun on October 6, 1935, when the movements of the knee-joints were already good. He was discharged on October 15, and when later seen in the out-patient department full function had been restored.

I must thank Mr. R. Vaughan Hudson, under whose care the patient was admitted to the Connaught Hospital, for permission to quote this case.—I am, etc.,

MAXWELL LANDAU,

Gravesend, Jan. 9.

Hon. Asst. Surgeon to Fracture Clinic,
Gravesend and N. Kent Hospital.

Seasonal Influence of Rheumatic Fever

SIR,—I should like to express my appreciation of Mr. F. Garwood's criticism (*Journal*, January 7, p. 38) of my article appearing in the *Journal* of July 2, 1938 (p. 15).

I agree that the statistical evidence *per se* is insufficient on which to base my conclusions. That the similarity of form of Graphs 2 and 5 might be in the nature of a coincidence is a very definite possibility, viewing the matter from a purely statistical angle. Proof of this is obtained from a study of the seasonal incidence of scurvy and rickets, where the incidence is approximately an inverse edition of that for rheumatic fever, but quite unrelated to the rate of change of temperature. This is undoubtedly due to a phase lag between the seasonal variation of radiant energy and the synthesis and saturation of the body with vitamins. It would appear that in rheumatic fever we have to decide whether the seasonal incidence is a phase-lag phenomenon or whether it is directly controlled by the rate of change of temperature and relative humidity. In support of the latter view we have the clinical impressions of Poynton and Schlesinger (*Recent Advances in the Study of Rheumatism*): "Sudden atmospheric changes to damp cold after a long spell of dry, hot, and dusty weather are, in our opinion, likely to lead to the first attack."

Mr. Garwood's suggestion of using data for several years is one that I have considered in the past. Unfortunately, rheumatic fever is not notifiable in this country, and, therefore, the practical difficulty lies in finding the necessary data. This objection does not hold in the case of Scandinavia, where the disease is notifiable. Indirect light may also be thrown on this aspect of the problem by the varying seasonal incidence of scarlet fever and diphtheria in different years. Any attempt to relate the incidence of rheumatic fever (scarlet fever, or diphtheria) in this country to simple harmonic curves reveals the possibility of a second climatic factor, which robs the possibility of correlating departures from a harmonic curve of much of its value. I will not comment further on this second factor, except to state that it probably accounts for the apparent increased vernal prevalence of throat infections on the eastern seaboard of North America.—I am, etc.,

Hendon, Jan. 14.

ARNOLD B. ROWLANDS.

Vitamin D in Diet

SIR,—We would request the courtesy of your *Journal* for a short comment on two points arising out of the paper "Vitamin D in Diet: Palatable Methods of Supply," in your issue of January 7 (p. 14), and out of your editorial on nutrition of the school child in the same issue (p. 24). Miss Lindsay and Professor Mottram make the following statement: "As the oil of herrings is credited with 10,000 international units per 100 grammes (Boas-Fixsen and Roscoe, 1937-8). . .". From long experience we have never found any samples of genuine herring oil that contained anything like as much vitamin D as would be indicated by these figures. Herring oil at 10,000 international units per 100 grammes, equal to 100 units per gramme, would be a valuable commercial source of vitamin D. It does not figure at all in this light.

The most recent biological test we have available is on herring oil caught off the East Coast of England produced during the midsummer of 1938 from fish in prime condition. This oil, tested biologically using sixteen pairs of rats, showed only twelve international units per gramme, even though it was known from its origin to contain a significant amount of fish-liver oil from other species—